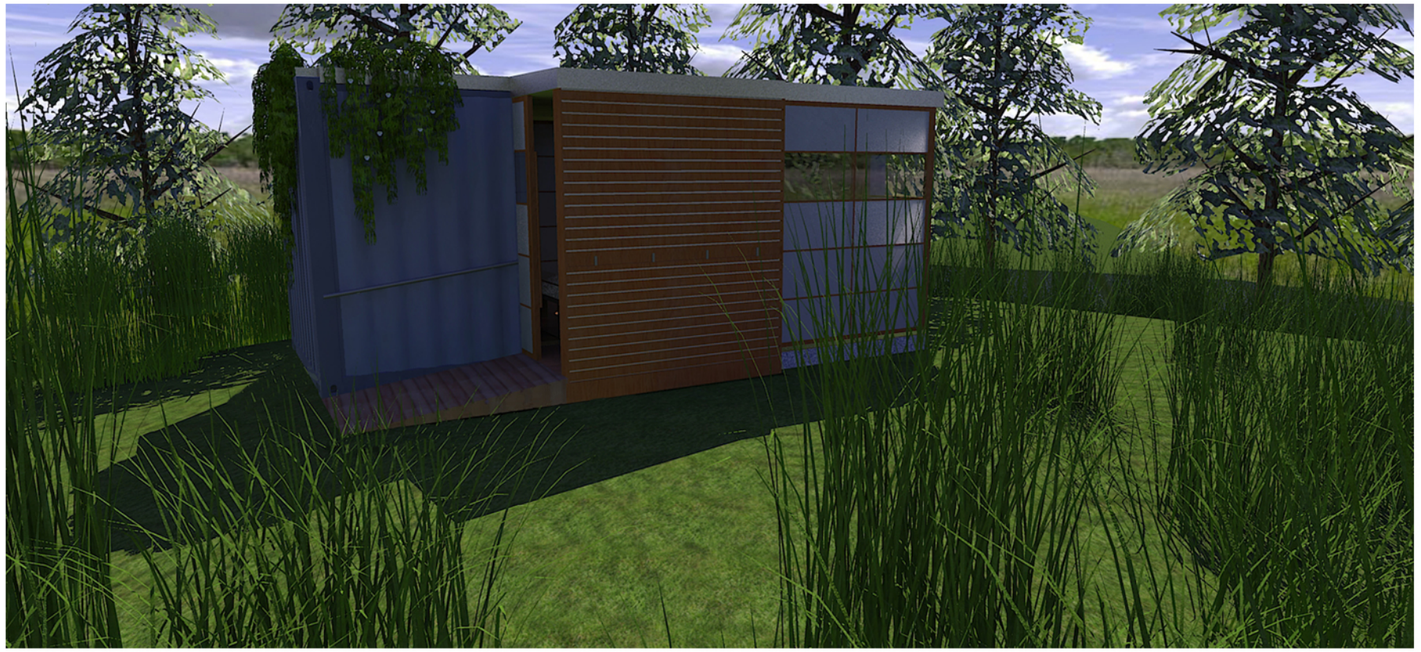
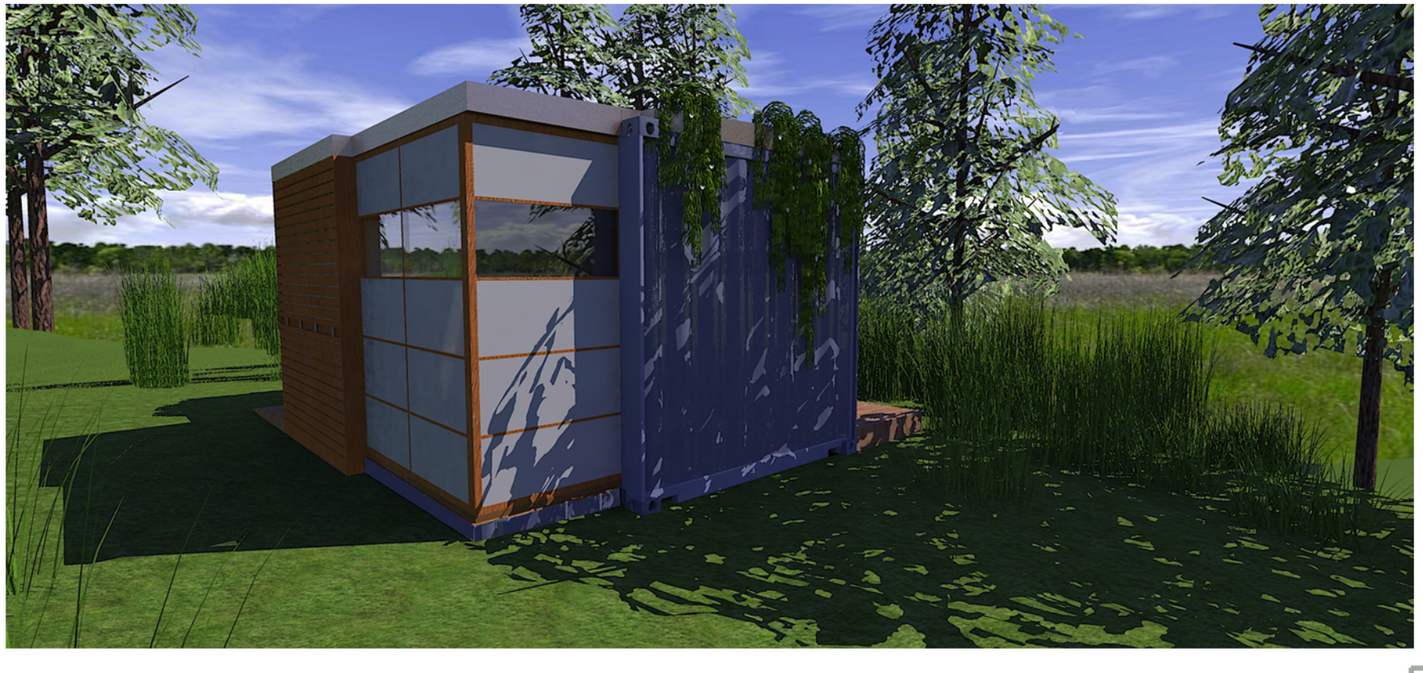
The **Origami Cabin** strives for holistic sustainability through social, economic and environmental sustainable design. The concept is inspired by traditional Japanese architecture and its efficient use of space as well as the use of horizontal and vertical lines to visually enhance the space. The use of natural materials in keeping with traditional Japanese architecture also promotes the incorporation of oneself into the outdoors.

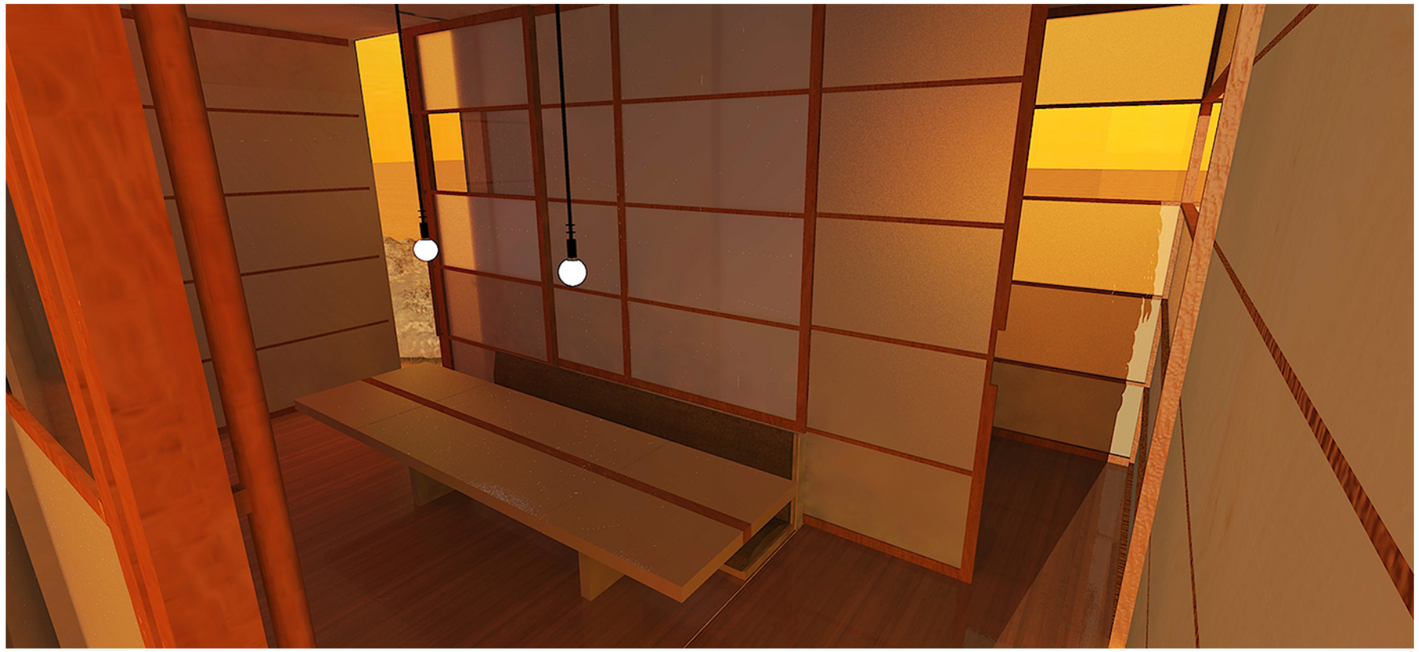
- Materials are sustainably sourced such as FSC and reclaimed wood as well as renewables such as bamboo.
- The layout seeks to maximize the structural capacity of the shipping container while at the same time promote the ability to fold into itself so that it can be closed and protected during the off-season or easily moved to another site.
- Through maximizing windows and creating translucent interior partitions, the interior of the container cabin becomes visually larger than it actually is.
- All door opening are sliding to allow for both compact folding and so as to not impede any path of travel.
- The exterior of the design seeks to integrate with its surroundings through the use of a reclaimed lumber rain screen, site specific exposed container painted colors and native plants that reflect the container cabins specific surroundings.
- The design lends itself to prefabricated modular construction specifically with the use of structural insulated panels and the mirrored layout driven by traditional Japanese design guidelines.
- Universal design is promoted in the design throughout with a ramped entrance, sliding doors (both entry and interior), low or no threshold doorways, an adjustable height table, an open floor plan, easy to grip handles and meets ADA requirements.
- Integrated storage in the platform beds maximizes all the space available and provides another functional design element for the end user.

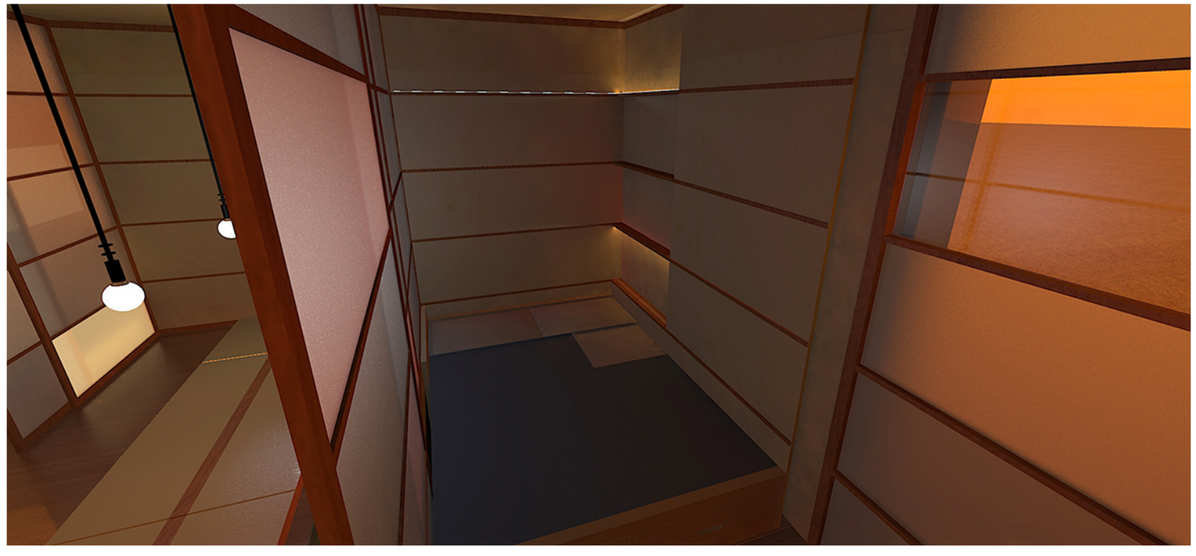




Energy Efficiency

- The design uses structural insulated panels for both the walls and the ceiling/roof with an R-value of 42 and 26 respectively. The panels due to the insulating foam that they use have a perm rating of less than 1.
- In addition to the SIP for the roof design, an extensive native vegetated roof is employed. This will achieve multiple sustainable goals such as insulation for both heating and cooling, aiding in cooling the cabin through reduced heat gain and mitigating storm water runoff.
- A portion of the roof is dedicated to Building Integrated Photovoltaics. These will provide a majority of the electricity required for the average use of the cabin.
- The windows and doors for the cabin are energy efficient with a low U-value of 0.21. The SHGC was selected to reflect the climate and is at 0.35.
- For HVAC the design uses Passive Haus standards as a guideline and employs an extremely efficient ERV. The ERV will ventilate, as well as help regulate the heating, cooling and humidity inside the cabin.
- The ERV also promotes an elevated indoor air quality through a MERV 13 filter and a consistent air change rate.
- The lighting types used in the design help keep the energy requirements at a minimum through dimmable fluorescent bulbs and LED strip cove lighting.
- The lights switches are designed to have photoelectric sensors.





THE ORIGAMI CABIN

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